



# Advanced Software Eng.

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# References

1

Roger S. Pressman, “Software Eng.: A Practitioner's Approach”, Seventh Edition

2

Ian Sommerville, “Software Engineering”, Ninth Edition



# Topics

1

Introduction and Review (App. 1 and 2 of Ref. 1)

2

Formal Modeling and Verification (Ch. 21 of Ref. 1)

3

Software Reuse (Ch. 16 of Ref. 2)

4

Aspect-oriented SE (Ch. 21 of Ref. 2)



# Topics (Cont.)

5

Service-oriented Architecture (Ch. 19 of Ref. 2)

6

Emerging Trends in SE (Ch. 31 of Ref. 1)



# Evaluation

1

Two practical or theoretical projects at the end of each chapter (4 marks)

2

Mid-term (5 marks)

3

Final exam (8 marks)

4

Reporting of one or two papers (3 marks)



# Prerequisites

1

Object-oriented Concepts

2

UML in addition to its tools (e.g., ArgoUML)

3

Software Processes (e.g., RUP, iterative and agile processes)

4

Other Concepts of SE (e.g., testing, risk management)



# Next session...

1

## Review object-oriented concepts

Classes and Objects

Inheritance and Polymorphism

Static Variables and Methods

Interfaces

Class Relations (such as association, aggregation, composition)

2

## Design and implement a simple OO program



**Thank you !**